

REMARKS:

Claims 23-42 are now pending in the application, with claims 23, 34 and 39-42 being the independent claims. Reconsideration and further examination are respectfully requested.

In the Office Action, objection was made to Figure 5 for containing the typographical error "Redeiver" in block 580 of Figure 5. The replacement drawing sheets correct this error. Accordingly, withdrawal of this objection is respectfully requested.

The previous claims in the application were rejected over U.S. Patent 6,006,254 (Waters) and U. S. Patent 4,156,790 (Doelz). The claims as rewritten above are believed to be allowable over the applied art.

In this regard, the present invention concerns methods, apparatuses and techniques for efficiently sending and/or receiving messages. Generally speaking, the present invention involves a difference message that both (i) explicitly identifies an earlier message sent to the recipient or other information that is accessible by the recipient and (ii) specifies difference information for modifying such information to produce the current message.

One advantage of the present invention is that the earlier message(s) or other information that form the basis for the current message are identified in the current message itself. This differs from prior art, such as the currently applied art, in which the message that forms the basis for the current message (i.e. from which one or more differences are specified) is fixed (e.g., the most recent message prior to the current message or the most recent 2-3 messages prior to the current message).

For example, Waters discloses the technique of identifying difference information with respect to the 3 most recently transmitted messages. As a result, if the recipient does not receive one of the previous messages or receives messages out of order, the recipient might

still be able to reconstruct the intended message. While such a technique might have certain advantages, it still is believed to lack the flexibility of the present invention.

More specifically, by explicitly identifying earlier basis information in the current message itself, the present invention often can achieve a significant reduction in the amount of data that needs to be transmitted. Moreover, this result often can be achieved even if there is a significant delay and/or a great deal of intermediate communications between the earlier message (or other information) and the current message.

Thus, independent claim 1 is directed to a method of sending a message to a recipient, in which a new message to be transmitted to a recipient is obtained and compared to at least one message previously transmitted to the recipient. Then, a difference message is constructed and transmitted to the recipient, the difference message including identification information identifying an earlier message previously transmitted to the recipient and difference information specifying a difference between the new message and at least a portion of the earlier message.

The foregoing combination of features is not disclosed or suggested by the applied art. For instance, the applied art does not disclose or suggest at least the feature of constructing and transmitting a difference message that includes identification information identifying an earlier message that was previously transmitted to the recipient.

In this regard, with respect to the previous claims, the Office Action made the following assertions with respect to Waters. First, it was asserted that Waters describes his message as containing an identifier to prior state information (citing column 6, lines 44-53, with respect to previous claim 4). In addition, it was asserted that Waters describes the identifiers as including unique time information (citing column 11, lines 58-63, with respect to previous claim 5).

However, both portions of Waters have been studied in detail and are only seen to discuss the use of globally unique IDs (GUIDs) for identifying objects (e.g., images) to be shared in a global shared environment (e.g., Interactive Sharing Transfer Protocol, or ISTP). Nothing in either portion of Waters indicates that any of such GUIDs identifies an earlier message that is used as a base (i.e., from which one or more differences are specified) in connection with a current message.

Nothing else in the applied references has been cited as disclosing or suggesting this feature the invention, and our review indicates that the applied references do not in fact disclose or suggest this feature. Accordingly, independent claim 1 is believed to be allowable over the applied art.

Independent claims 34 and 41 are directed to the sending of a message to a recipient. A new message to be transmitted to a recipient is obtained and compared to information accessible to the recipient in order to find information that is similar to at least a portion of the new message. A difference message that includes identification information identifying the similar information and difference information specifying a difference between the new message and the similar information is then constructed, and the difference message is transmitted to the recipient.

The foregoing combination of features is not disclosed or suggested by the applied art. In particular, for reasons similar to those set forth above, the applied art does not disclose or suggest at least the feature of constructing and transmitting a difference message that includes identification information identifying the information and difference information specifying a difference between the new message and information accessible to the recipient.

In addition, claims 34 and 41 recite the feature of comparing a new message to information accessible to the intended recipient in order to find information that is similar to at least a portion of the new message. This feature is newly clarified in the claims and

therefore was not addressed in the current Office Action. However, the applied art has been studied in detail and does not appear to disclose or to suggest this feature of the invention.

Accordingly, independent claims 34 and 41 are believed to be allowable over the applied art.

Independent claim 39 is directed to the decoding of a received message, in which a new message is received. The received message includes identification information identifying an earlier message previously received and difference information specifying a difference between the new message and at least a portion of the earlier message. The earlier message is retrieved based on the identification information then is modified as indicated by the difference information.

The foregoing combination of features is not disclosed or suggested by the applied art. In particular, for reasons similar to those set forth above, the applied art does not disclose or suggest at least the feature of receiving and decoding a difference message that includes identification information identifying an earlier message that was previously transmitted to the recipient.

Accordingly, independent claim 39 is believed to be allowable over the applied art.

Independent claims 40 and 42 are directed to the decoding of a received message, in which a new message is received. The new message includes identification information identifying accessible information and difference information specifying a difference between the new message and the accessible information. The accessible information is retrieved based on the identification information in then is modified as indicated by the difference information.

The foregoing combination of features is not disclosed or suggested by the applied art. In particular, for reasons similar to those set forth above, the applied art does not disclose or suggest at least the feature of receiving and decoding a difference message that includes

identification information identifying information that is accessible to the recipient and difference information specifying a difference between the new message and the identified accessible information.

Accordingly, independent claims 40 and 42 are believed to be allowable over the applied art.

The other claims in this application depend from the independent claims discussed above, and are therefore believed to be allowable for at least the same reasons. Because each dependent claim also defines an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing remarks, it is believed that the entire application is in condition for allowance, and an indication to that effect is respectfully requested.

If there are any fees due in connection with the filing of this paper that have not been accounted for in this paper or the accompanying papers, please charge the fees to Deposit Account No. 08-2025. If an extension of time under 37 C.F.R. 1.136 is required for the filing of this paper and is not accounted for in this paper or the accompanying papers, such an extension is requested and the fee (or any underpayment thereof) should also be charged to this Deposit Account. A duplicate copy of this page is enclosed for that purpose.

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Respectfully submitted,
MITCHELL, SILBERBERG & KNUPP LLP

MITCHELL, SILBERBERG & KNUPP LLP
11377 West Olympic Boulevard
Los Angeles, California 90064
Telephone: (310) 312-2000
Facsimile: (310) 312-3100

By /Joseph G. Swan/
Joseph G. Swan
Registration No. 41,338

IN THE DRAWINGS:

Please amend the drawings by changing "Joe" to "Kitty" in block 426 of Figure 4A and by changing "Redeiver" to "Receiver" in block 580 of Figure 5. Replacement drawing sheets are submitted herewith. Other than the indicated changes, the accompanying replacement drawing sheets are identical to the originals.

The amendment to Figure 5 was requested in the Office Action in order to correct the typographical error.

The amendment to Figure 4A changes that drawing so that it corresponds to the written description and to the other drawings. More specifically, page 12 lines 17-18 of the Specification and Figure 4D together indicate that the data value of the fourth argument of the first data structure of Message ID 0001 ("Joe") should be replaced with the data value of the second argument of the first data structure of message ID 0002 ("Kitty") when generating the new message. This would only occur if the fourth argument of the first data structure of Message ID 0007 (i.e., the new message) was intended to have the value "Kitty".

Accordingly, entry of both drawing amendments is respectfully requested.